REMARKS

The Examiner is thanked for the thorough examination of this application and the indication that claims 10 and 11 contain allowable subject matter.

Claim 6 has been amended to more clearly identify a feature of an embodiment of the present invention. No new matter has been added. In addition claim 9 has been cancelled without prejudice. In view of these amendments, Applicant submits that the issues raised under 35 U.S.C. § 112 have been addressed, and that these rejections should be withdrawn.

Discussion of Substantive Rejections

Claims 1-3, 5, 8, 9, 12 and 14 were tentatively rejected under 35 USC 102 as allegedly anticipated by Lim (U.S. Patent No. 6,778,007). Claims 4, 6, 7 and 13 were tentatively rejected under 35 USC 103 as allegedly unpatentable over Lim in view of Khalid (US20040150464). For at least the reasons set forth herein, Applicant disagrees and requests that the rejections be withdrawn.

Independent claim 1 recites.

> 1. A voltage reference generator for generating an output voltage at an output node, comprising:
> ***a level shifter for shifting a first reference voltage*** into the output voltage at the output node according to a shift between the first reference voltage and the output voltage; and
> ***a feedback circuit for monitoring the output voltage and a second reference voltage*** to control the shift and to normalized the output and second reference voltages.

(*Emphasis added*).

The Office Action alleges that the level shifter (P3 and P4) in Lim shifts a first reference voltage (voltage at the gate of P4) into the output voltage at the output node according to a shift

between the first reference voltage and the output voltage. The Office Action also alleges that the circuit 10 monitors the output voltage and a second reference voltage (VREF) to control the shift and to normalize the output voltage and the second reference voltage.

However, as cited on lines 6-20 in column 5, the circuit 50 is a current discharge circuit in which the transistor P4 is turned on such that current flows from node B to the ground when the overshoot of internal power voltage occurs such that VINT x (R5/R4+R5)) is greater than the threshold voltage of the transistor P4. Thus, overshoot of the power voltage VINT is prevented. Further, as cited on lines 32-48 in column 1 in Lim, when the reference voltage VREF is greater than the voltage VINT at the output terminal, the transistor N1 is turned on and to lower the voltage of node A. The PMOS P3 is turned on to raise the voltage VINT. When the reference voltage VREF is lower than the voltage VINT at the output terminal, the transistor N2 is turned on and to raise the voltage of node A. The PMOS P3 is turned off to lower the voltage VINT.

In view of this, in Lim, the transistor P4 functions to discharge the output terminal to the ground when overshoot of the power voltage occurs, rather than shifting the voltage at the gate of the transistor P4 into to the output voltage at the output node. Hence, the transistors P3 and P4 in Lim are totally different from the level circuit shifting a first reference voltage into the output voltage at an output node as claimed in claim 1. Thus, transistors P3 and P4 in Lim cannot read on the level shifter for shifting a first reference voltage into the output voltage at the output node as claimed in claim 1.

As Lim does not teach that the level shifter for shifting a first reference voltage into the output voltage at the output node as claimed in claim 1, Lim does not disclose all features of claim 1, and the rejection of this claim should be withdrawn. Insofar as claims 2-3, 5, 8, 9, 12 and 14 depend from claim 1, the rejections of these claims should be withdrawn as well.

With regard to the rejections of claims 4, 6, 7, and 13 under 35 U.S.C. § 103(a), the Examiner is respectfully reminded that to establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teaching. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 2142.

Lim and Khalid, standing along or in combination, fail to disclose, teach, or suggest, *inter alia*, at least the following feature, which is recited in claim 1: "a level shifter for shifting a first reference voltage into the output voltage at an output node". Therefore, for at least the same reasons that claim 1 defines over the cited art, dependent claims 4, 6, 7, and 13 define over the cited art as well.

In addition, and as a separate and independent basis for the patentability of claims 4, 6, 7, and 13, Applicant respectfully submits that the Office Action has failed to cite a proper motivation to combine the teachings of Lim and Khalid. As to the features defined in claims 6 and 7, the Office Action offered no motivation for the selective combination of Lim and Khalid. As to claim 4, the Office Action alleged only that "it would have been obvious ... by reversing the transistor and the power supplies due doctrine function equivalent." This is not a proper rationale or motivation for combining Lim and Khalid. Any proper motivation must be found in the cited art itself, and this alleged motivation appears to be subjective and is not present in the art.

Likewise, with regard to claim 13, the Office Action conclusorily alleged that "it would have been obvious ... to add a low-pass filter to the output of Lim's differential amplifier for the purpose of filtering the output of the amplifier." Again, the Office Action reached this conclusion, but offered indication of where, in the prior art, this rationale or motivation was derived. As such, and for at least these reasons, the rejections under 35 U.S.C. § 103 are misplaced and should be withdrawn.

In this regard, it is well-settled law that in order to properly support an obviousness rejection under 35 U.S.C. § 103, there must have been some teaching in the prior art to suggest to one skilled in the art that the claimed invention would have been obvious. W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc., 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

> "The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ..." Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure... In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention."

(Emphasis added) In re Dow Chemical Company, 837 F.2d 469, 473 (Fed. Cir. 1988).

In this regard, Applicants note that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest both the combination of elements and the structure resulting from the combination. Stiftung v. Renishaw PLC, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art

references, the prior art must properly suggest the desirability of combining the particular elements to create a voltage reference generator as defined by the pending claims.

When an obviousness determination is based on multiple prior art references, there must be a showing of some "teaching, suggestion, or reason" to combine the references. Gambro Lundia AB v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997) (also noting that the "absence of such a suggestion to combine is dispositive in an obviousness determination").

Evidence of a suggestion, teaching, or motivation to combine prior art references may flow, inter alia, from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. See In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be "clear and particular." Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617.

If there was no motivation or suggestion to combine selective teachings from multiple prior art references, one of ordinary skill in the art would not have viewed the present invention as obvious. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); Gambro Lundia AB, 110 F.3d at 1579, 42 USPQ2d at 1383 ("The absence of such a suggestion to combine is dispositive in an obviousness determination.").

Significantly, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another reference with the particular prior art reference. Winner Int'l Royalty Corp. v. Wang, No 98-1553 (Fed. Cir.

January 27, 2000). The Office Action has failed to cite any apparent disadvantage of Lim, which would prompt the combination of select teachings of Khalid therewith.

For at least the foregoing reasons, Applicant submits that the presently-outstanding rejections to claims 1-9 and 12-14 should be reconsidered and withdrawn.

No fee is believed to be due in connection with this submission. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to deposit account 20-0778.

Respectfully submitted,

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